

In Figs. 1 and 2 the proximal vessels alone are represented to save confusion.

M. Marey claims for this his new *schema* that with it

he can reproduce all the phenomena of the cardiac circulation; at the same time that with it he can master all the theories with reference to the significance of the most

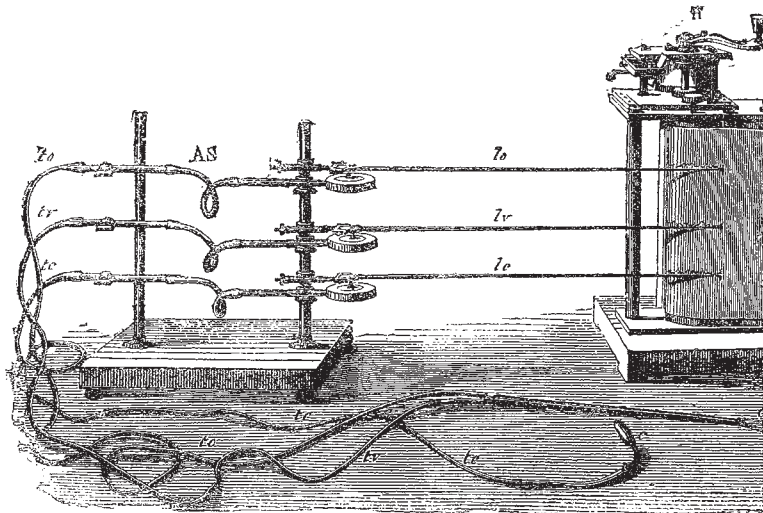


FIG. 3.

important elements of the pulsation of the heart. In this we think he is too sanguine; for there are fundamental elements of the cardiac circulation which it is quite unable to indicate even the existence of by means of it. One of

race-portraits. Catlin's American Indians (particularly the large copies) and Burchell's Hottentots and Bushmen, were among those of real value. But most engravings of race-types to be found in books were worthless, either

wanting the special characters of the race, or absurdly caricaturing them. Now-a-days, little ethnological value is attached to any but photographic portraits, and the skill of the collector lies in choosing the right individuals as representatives of their nations. Thus the great *Anthropologisch-Ethnologisches Album* of Carl Dammann of Hamburg, completed some months ago, is one of the most important contributions ever made to the science of man. Consisting of fifty plates, portfolio size, with ten to twenty photographs on each plate, it goes far toward an adequate representation of man in all his varieties. A copy may be seen at the Anthropological Institute, but its cumbrousness and cost (18*l.*) are beyond the limits of most private libraries. It is therefore satisfactory that the publishers have now brought out a smaller educational atlas, price 3*l.* 3*s.*, containing from 150 to 200 portraits, in a binding suitable for a drawing-room book. We wish it all success, for it will make new anthropologists wherever it goes.

The plan on which the portraits are arranged is mainly geographical, exact race-division being from the nature of the case impracticable. Indeed one of the effects of both the large and small albums will be in a negative direction. They will do more than any quantity of written criticism to check the rash generalisation as to race so common in ethnological systems, and they will do this by impressing on the minds of students the real intricate blending of mankind from variety to variety. It is not impossible that some day the time may come for scientifically calculating the constitution of a race, on Quetelet's principle of a central type with gradually decreasing variants. But that time has not come yet, and the most

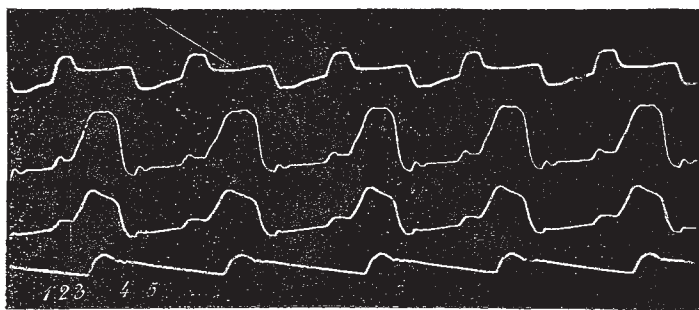


FIG. 4.

the most important of these is the fact that the relative length of the systole and diastole varies with the rapidity of the pulse, a most important point not at present sufficiently laid stress on. Another is the active diastole of the ventricle, which immediately follows the closure of the aortic valve. These and other minor considerations all go to prove that, though the new *schema* of the circulation is a great improvement upon all others yet introduced, nevertheless the exact representation of acts so complicated as the systole of muscular cavities cannot yet be imitated by the employment of the unaided mechanical powers.

#### DAMMANN'S RACE-PHOTOGRAPHS

*Ethnological Photographic Gallery of the Various Races of Man.* By C. and F. W. Dammann. (London: Trübner and Co.)

THE science of anthropology owes not a little to the art of photography. It is true that in previous times some few artists took the trouble to draw careful

that can at present be done to define a race-type is vaguely to make out some of its dominant features. A good example may here be seen in Plate I., which is headed "Germanic Types," though not consisting entirely of them. The last portrait is of a Welsh market girl, and just above her is Livingstone, who as we know was from the Gaelic Island of Ulva. If there is such a thing as a Keltic type, these two portraits show it; they might very well have been father and daughter. The contrast of the dark, near-eyed, compact-featured Welsh girl with the fair North German peasant woman next her is excellent, and the Bavarian lady next again shows the difference as well as possible between South and North German.

It is needless to enumerate the peoples of each district of the globe who have contributed their cartes-de-visite to this album, but a few remarks on incidental points occur as one turns over the plates. A young newly-married couple from China suggest an answer to the question, At what age may ethnological portraits best be taken? No doubt it should be somewhere about twenty years old, more or less, when the physical type has become developed, but the influence of thought, occupation, and circumstances have not yet masked the lines of race. In these plates, the elderly Chinese broker and the Japanese gentleman aged sixty-four, are in expression curiously like what Europeans of the same age and occupations might be. Yet when they were young, the faces of these Orientals probably bore no such apparent European likeness. What an ethnologist wants is not the cast of education and experience, but the mere national face, and this must be taken young. Again, for contrast between purity and mixture of nations, it is interesting to compare Plate XII., containing Siberian tribes of comparatively uniform type, with the heterogeneous figures in the next plate from Morocco and Algeria. The gradual blending of races, of which mention has been already made, may be well studied in Plates VIII. to XI., which bring into view better than it ever has been shown before, how the Malay peculiarities are to be traced into the Chinese and Japanese types. Lastly it may be remarked that the often-repeated ethnological theory deriving the natives of America from Eastern Asia, will receive but little support from a comparison of the portraits here given from Siberia, Japan, and China on the one hand, and North America on the other.

By way of fault-finding, it may be added that the short letterpress at the foot of the plates wants revision.

EDWARD B. TYLOR

#### OUR BOOK SHELF

*The Eastern Seas: being a Narrative of the Voyage of H.M.S. "Dwarf" in China, Japan, and Formosa. With a Description of the Coast of Russian Tartary and Eastern Siberia, from the Corea to the River Amur. By Capt. B. W. Bax, R.N. With map and illustrations. (London: John Murray, 1875.)*

CAPT. BAX spent three years, 1871-4, cruising about in the waters on the east of Asia, and has written a pleasant gossip account of what he saw. He went over ground that has been often traversed, and has not much that is new to tell. Many details, especially historical, are confessedly borrowed from well-known authorities, so that the work is to some extent a compilation. An

unnecessarily large amount of space is devoted to accounts of various wrecks that occurred on the coasts near where the *Dwarf* happened to be cruising, and many incidents of trifling importance are narrated, adding considerably to the size but not to the value of the book. Probably the most valuable part of the work is that wherein the author's visits to Formosa and to the Russian coasts are described. Capt. Bax had some favourable opportunities of becoming acquainted with the Formosans, both civilised and wild, and gives some interesting details as to their appearance, manner of life, and customs; his second chapter is a history of the island from its discovery by the Chinese. There is a good map of the island, and it would have added to the value of the work had there been a map of the whole region with which the book is concerned. In his narrative of the voyage of the *Dwarf* along the coast of Asiatic Russia, some interesting facts are given as to the present condition of the Russian possessions in that quarter as far north as Nikolevsk. Capt. Bax also made an ascent of Fusi-yama, in Japan, of which he gives a pleasant account. Altogether, although the work adds very little to our knowledge of either China, Japan, or Asiatic Russia, it contains a good deal of interesting reading.

*Commodore J. G. Goodenough. A Brief Memoir. By Clements R. Markham, C.B. (London and Portsmouth: Griffin and Co.)*

THIS is a modest and well-written narrative of the life of a man whose premature death is a distinct loss to the British navy and to geographical science. Every naval officer should read it, and indeed all who wish to be inspired by the record of a noble life. The unfortunate circumstances connected with the death of Goodenough must be fresh in the memory of our readers. He undoubtedly was a martyr to what he conceived to be his duty; he fell in the attempt to conciliate the savages of Santa Cruz Island, and to assure them of the good intentions of England towards them. Had he been spared he would no doubt have done much good in this direction, as well as added to our knowledge of the Pacific Islands. Commodore Goodenough had high ideas of the scientific and other qualifications which are necessary to make an efficient naval officer, and took every opportunity to advocate these ideas. He himself was a man of varied attainments, and was a student up to the last. He took a warm interest in geographical science, and was for long an earnest advocate for a new Arctic expedition. Commander Markham and several other officers on board the *Alert* and *Discovery* had the advantage of serving under Goodenough; while Mr. C. R. Markham was himself his shipmate at an early part of his career. A good portrait is prefixed to the narrative.

#### LETTERS TO THE EDITOR

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.]

Sir Thomas Millington and the Sexuality of Plants

I THOUGHT it was sufficiently obvious that Sir Thomas Millington's claims to be regarded as the discoverer of the function of the stamens in what are called hermaphrodite flowers was based upon what is stated by Grew. That I confess has always appeared to me conclusive upon the matter. I am not aware that Sir Thomas Millington ever published anything in his own name upon the subject.

With regard to Grew's book, I think Mr. Bennett is still under some misapprehension, which I trust he will allow me to point out to him. In *NATURE* (vol. xiii. p. 86) he speaks of a first edition of 1671, and also of an edition of 1681. In *NATURE* (vol. xiii. p. 166), he appears to identify the first of these with Grew's Treatise, "The Anatomy of Vegetables Begun, with a general account of vegetation founded thereupon," published in